

Claims

1. Use of CD38, or a portion thereof or analogue thereof which can inhibit the binding of CD38 to a non-follicular dendritic cell (DC) or a follicular dendritic cell (FDC) and which retains the ability of CD38 to stimulate a DC or FDC, for use in the manufacture of an adjuvant for use in immunotherapy.
2. Use according to claim 1 wherein the portion is an extracellular domain portion or the analogue is a fusion protein which comprises an extracellular domain portion of CD38 and a non-CD38 sequence.
3. Method of causing maturation of DCs comprising contacting DCs *ex vivo* with CD38 or a portion or analogue as defined in claim 1 or claim 2.
4. A method as claimed in claim 3 wherein said DCs are simultaneously with said contacting under conditions such that the DCs correspond to DCs subject to T cell signalling.
5. A vaccine comprising an antigenic component and an adjuvant component, wherein said adjuvant component comprises CD38 or a portion or analogue as defined in claim 1 or claim 2.
6. A vaccine according to claim 5 in which the antigenic component comprises a CD8 T cell epitope.
7. An *ex vivo* mature DC that has been made using the method of claim 3 or claim 4.
8. A DC according to claim 7 for use in a method of treating the human or animal body by therapy.

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9. A DC according to claim 7 for use in stimulating a T cell response *in vivo*.
10. A vaccine comprising a DC according to claim 7.
11. A method of stimulating T cells specific to an epitope *in vitro* comprising contacting the T cells with a DC according to claim 7 under conditions in which the DC presents the epitope to the T cell.
12. (i) The native ligand present on a FDC or DC which binds CD38 and which is substantially free of FDC or DC cell membrane, excluding CD31;
- (ii) a protein which is at least 70% homologous to (i) and binds CD38; or
- (iii) a fragment of (i) or (ii) which retains the ability to bind CD38.
13. A polynucleotide that encodes (i), (ii) or (iii) as defined in claim 12.
14. An antibody that binds (i), (ii) or (iii) as defined in claim 12 and inhibits the binding of CD38 to (i), (ii) or (iii).
15. A method of identifying an adjuvant comprising contacting the CD38 ligand present on FDCs or DCs, or (ii) or (iii) as defined in claim 12 with a candidate substance in the presence of CD38 or an analogue as defined in claim 1 and determining whether said substance competes with CD38 or the analogue for binding to the CD38 ligand, (ii) or (iii) and whether said substance is capable of maturing DCs.
16. A use, method or vaccine according to any one of claims 1 to 6 in which the analogue is an adjuvant identified in the method of claim 15.

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17. An inhibitor of CD38 ligand as defined in claim 12, which specifically inhibits activation of said ligand by CD38.
18. An inhibitor according to claim 16 for use in immunosuppression.

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